



FLORENCE COPPER INC.

1575 W. Hunt Highway, Florence, Arizona 85132 USA

florencecopper.com

December 29, 2021

Mr. David Albright
Manager, Groundwater Protection Section
USEPA Region 9 (WTR-4-2)
75 Hawthorne St
San Francisco, CA 94105

Subject: Underground Injection Control (UIC) Permit Number R9UIC-AZ3FY11-1
Monthly Update for AL/AQL Exceedances at Supplemental Monitoring Well M59-O

Dear Mr. Albright:

Florence Copper is providing this monthly update of supplemental monitoring well M59-O alert level (AL) and/or Aquifer Quality Limit (AQL) exceedances under Underground Injection Control (UIC) Permit Number R9UIC-AZ3FY11-1 (Permit).

Florence Copper has been voluntarily monitoring M59-O monthly for the parameters listed in Table 1 (see attached), and previously submitted a monthly report on November 23, 2021. Table 1 has been updated to include the most recent laboratory results from the monthly sample collected on November 8, 2021 and received on December 6, 2021. Concentrations of sulfate, total dissolved solids (TDS), total uranium, adjusted gross alpha, and gross beta have decreased since the last monthly sample. Radium and magnesium concentrations increased. The December monthly sample was collected on December 13, 2021 and the results are pending.

Redevelopment of injection and recovery wells in the wellfield continued during the month as part of the ongoing rinsing activities. Observation wells on the east side of the wellfield are being redeveloped by brushing the well casing and removing the resulting sediments by airlifting.

As part of the next step in the rinsing plan, flows in the wellfield were reversed in December. This included pumping from all four injection wells and injecting at recovery well R09.

Hydraulic gradients were maintained throughout the month.

Florence Copper will continue monthly sampling of supplemental monitoring well M59-O for parameters which exceeded the ALs and AQLs and will report these results monthly to EPA until all concentrations are below the ALs and AQLs.

Please feel free to contact me should you have any questions or comments.

Sincerely,
Florence Copper, Inc.



Brent Berg
General Manager

Cc: Nancy Rumrill, EPA Region 9
Maribeth Greenslade, ADEQ

Table 1. Supplemental Monitoring Well M59-O Monthly Sampling Results

	Parameter						
	Magnesium (mg/L)	Sulfate (mg/L)	Total dissolved solids (TDS) (mg/L)	Total Uranium (mg/L)	Adjusted gross alpha (pCi/L)	Radium 226+228 (pCi/L)	Gross beta (pCi/L)
AL	23	202	854	0.0052	15.8	6.9	16
AQL	--	--	--	--	15.8	6.9	16
12/28/2020	57.2	865	1,860	0.037	73.5 ± 3.7	19.8 ± 0.8	43.2±2.7
1/18/2021	63.1	960	1800	0.038	35.4 ± 2.5	22.0 ±0.8	52.7±3.0
2/22/2021	26.5	383	970	0.0088	17.9±1.4	6.2±0.5	NA
3/23/2021	19.1	228	762	0.003	18.8±1.5	7.0±0.6	NA
4/14/2021	19.8	249	780	0.0038	18.1±1.2	10.9±0.7	19.6±1.9
5/19/2021	65.6	999	2010	0.0096	49.1±2.1	18.0±0.8	52.1 ± 3.3
6/1/2021	59.8	850	1900	0.0117	57.3±2.9	13.6±0.7	36.9±2.9
7/19/2021	70	1200	2300	0.0187	29.4±3.2	15.4±0.7	41.6±3.2
8/24/2021	59	1100	2100	0.0326	31.3±3.7	13.7±0.6	36.8±3.1
9/20/2021	59	990	2000	0.024	24.4±3.4	10.3±0.6	38.6±3.1
10/19/2021	55	820	1800	0.043	28.0±2.0	10.9±0.6	33.2±2.7
11/9/2021	65	670	1500	0.0096	27.9±2.3	11.9±0.6	28.0±2.4

BOLD values are exceedances of AL and/or AQL

NA: not analyzed